| Monitoring Data Re | ecord | | | | | | | |
|--|--|--|--|--|--|--|--|--|
| Project Title: R-2719A Crescent Road CO | DE Action ID: 200802460 | | | | | | | |
| WQC Number: 003763 | 200002100 | | | | | | | |
| Stream Name: UT to Falling Creek | | | | | | | | |
| City, County and other Location Information: <u>UT to Fa</u> | ulling Creek is located on US 70 just west | | | | | | | |
| of the C.F. Harvey Parkway interchange in Kinston, Lenoir Co. | | | | | | | | |
| Date Construction Completed: 3/3/11 Monitoring Year: (4) of 5 | | | | | | | | |
| Ecoregion: Southeastern Floodplains and Low Terraces 8 digit HUC unit 03020202 | | | | | | | | |
| USGS Quad Name and Coordinates: <u>35.261881</u> , -77.683669 | | | | | | | | |
| Rosgen Classification: E5 | | | | | | | | |
| Length of Project: 2,393' Urban or Rural: Rur | ral Watershed Size: 0.5 sq. miles | | | | | | | |
| Monitoring DATA collected by: M. Green, J. Young | | | | | | | | |
| Date: 6/10/15 | | | | | | | | |
| Applicant Information: | | | | | | | | |
| Name: NCDOT Roadside Environmental Unit | | | | | | | | |
| Address: 1425 Rock Quarry Road Raleigh, No. | C 27610 | | | | | | | |
| Telephone Number: (919) 861-3772 E | Email address: mlgreen@ncdot.gov | | | | | | | |
| Consultant Information: | | | | | | | | |
| Name: | | | | | | | | |
| Address: | | | | | | | | |
| | Email address: | | | | | | | |
| Project Status: Complete | 2 | | | | | | | |
| | | | | | | | | |
| Monitoring Level required by COE and DWQ (404 por Monitoring Level 1 requires completion of Section 1, See Permit States: Monitoring of the stream restoration as requirements. Monitoring shall be performed twice annually year period following completion of the work. Monitoring plant survival determinations, and visual inspection of stream five years, provided at least two bankfull events have occubankfull events have not occurred by the end of the five year DWQ's discretion, cease further monitoring of the site. To different monitoring years. | ection 2 and Section 3 areas shall consist of Level 1 monitoring y (summer and winter) for each year of a five g activities shall consist of reference photos, m stability. The sites shall be monitored for urred during this monitoring period. If two ir monitoring period, the NCDOT may, at the | | | | | | | |
| The permittee shall monitor the onsite buffer mitigation site and photo evidence. An annual report shall be submitted to monitoring results, survival rate/success of tree and vege through the riparian buffer has been maintained. The first year of final planting. Failure to achieve a buffer density of the annual report to provide appropriate remedial action implementation. Approval of the final annual report and a for DWQ is required. | the DWQ for a period of five years showing etation establishment, and that diffuse flow annual report shall be submitted within one 320 trees per acre after five years will require us to be implemented and a schedule for | | | | | | | |
| | | | | | | | | |

Total number of reference photo locations at this site:

12 photos were taken from 6 photo point locations along the channel and 2 overview photos were taken of the site

Dates reference photos have been taken at this site: 1/31/12, 7/20/12, 1/29/13, 7/11/13, 1/14/14, 6/26/14, 1/23/15, 6/10/15

Individual from whom additional photos can be obtained (name, address, phone):_____

Other Information relative to site photo reference: A site map with vegetation plot and photo point locations is included with this report.

| Section 2. | PLANT SURVIVAL |
|-------------|--------------------------------------|
| Attach plan | n sheet indicating reference photos. |

| Estimated causes, and proposed/required remedial action: | ion: |
|--|------|

ADDITIONAL COMMENTS: Planting was completed at this stream restoration project in March 2011. Planted vegetation along the streambank and within the buffer area consisted of: Type I – Elderberry and Silky Dogwood. Type II – River Birch, Green Ash, Overcup Oak, and Swamp Chestnut Oak. There were four 50 x 50 foot vegetation plots set throughout the buffer area to determine the number of trees per acre were surviving. Year 4 plant survival showed that 516 trees per acre were surviving. Silky dogwood and black willow were noted in some areas along the streambank. Other vegetation noted onsite included soft rush, red maple, broomsedge, pine, baccharis, cattail, woolgrass, morning glory, *Scirpus* sp., sweetgum, briars, tear-thumb, wax myrtle, lespedeza, and various grasses.

On Aug. 21, 2014, NCDOT met onsite with regulatory agencies to review the site. After the site review, NCDOT proposed to perform a supplemental planting of baldcypress trees throughout the site. On Jan. 23, 2015, NCDOT planted (180) -1 gallon baldcypress trees throughout the site. Baldcypress trees are now shown as a planted specie in the table below. NCDOT will continue to monitor plant survival at the UT to Falling Creek stream mitigation site.

If required to complete Level 1 and Level 2 monitoring <u>only</u> stop here; otherwise, complete section 3.

| Plot # | River Birch | Green Ash | Overcup Oak | Swamp Chestnut Oak | Baldcypress | Total (Year 4) | Total (at planting) | Density (Tree/Acre) |
|------------------------|-------------|-----------|-------------|--------------------|-------------|----------------|---------------------|---------------------|
| 1 | 21 | 5 | 3 | | 2 | 31 | 37 | 570 |
| 2 | 15 | 6 | 3 | 1 | 2 | 27 | 41 | 448 |
| 3 | 4 | 20 | 4 | 1 | 3 | 32 | 41 | 531 |
| 4 | 15 | 9 | 11 | | 3 | 38 | 50 | 517 |
| Year 4 Average Density | | | | | | | 516 | |
| Year 3 Average Density | | | | | | 498 | | |
| Year 2 Average Density | | | | | | 537 | | |
| Year 1 Average Density | | | | | | | 625 | |

Section 3. CHANNEL STABILITY

Visual Inspection: The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. <u>Physical measurements of channel stability/morphology will not be required.</u> Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

UT to Falling Creek is stabilized for the Year 4 Summer evaluation. Bankfull determinations are being recorded by a surface gauge located along the streambank. See the weblink for UT to Falling Creek gauges to see a graph of bankfull events. NCDOT will continue to monitor channel stability at the UT to Falling Creek stream mitigation site.

Date Station Station Station Station Station Number Number Number Number Number Structure Type Is water piping through or around structure? Head cut or down cut present? Bank or scour erosion present? Other problems noted?

Section 4. **DEBIT LEDGER**

The entire UT to Falling Creek stream mitigation site was used for the R-2719A project to compensate for unavoidable stream impacts.

UT to Falling Creek



Photo Point #1 (Upstream)



Photo Point #2 (Upstream)



Photo Point #3 (Upstream)



Photo Point #1 (Downstream)



Photo Point #2 (Downstream)



Photo Point #3 (Downstream)

Year 4 Summer - June 2015

UT to Falling Creek



Photo Point #4 (Upstream)



Photo Point #5 (Upstream)



Photo Point #6 (Upstream)



Photo Point #4 (Downstream)



Photo Point #5 (Downstream)



Photo Point #6 (Downstream)

Year 4 Summer - June 2015

UT to Falling Creek



Plot #1



Plot #3



Overview photo looking upstream from US 70



Plot #2

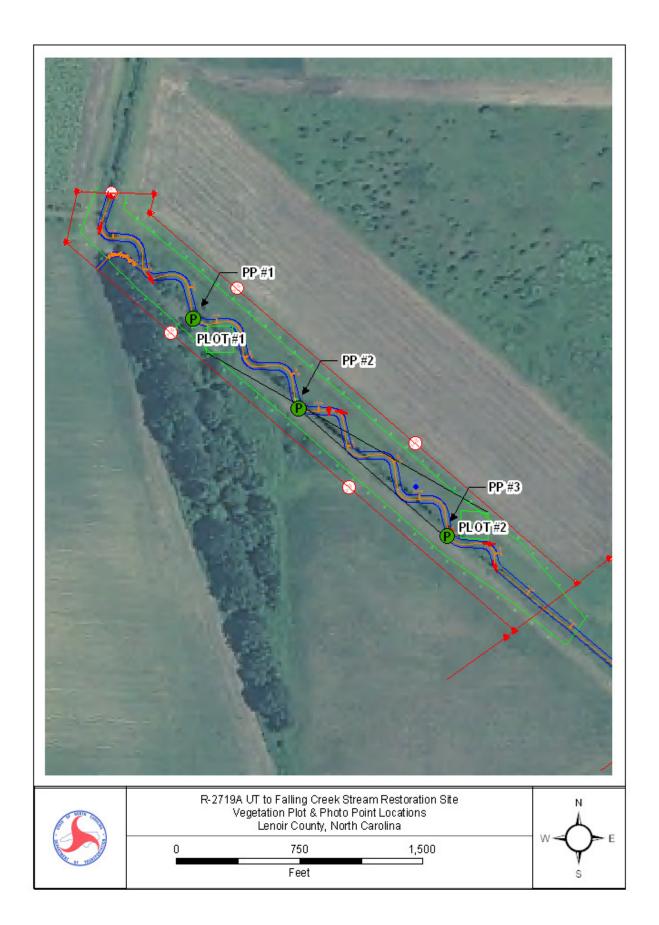


Plot #4



Overview photo looking downstream from US 70

Year 4 Summer – June 2015









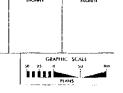
PROJECT VICINITY - R-2719A UT to Falling Creek Mitigation Site Lenoir County, North Carolina

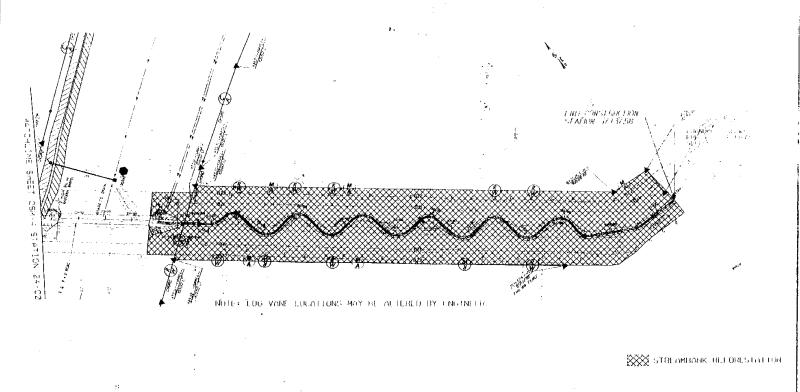
0 1,000 2,000 Feet



R 2719A 3.5 ACRES STREAMBANK REFORESTATION DATUM DESCRIPTION PARTON FOR A SETTLE OF THE SHAPE OF THE STATE OF THE SHAPE OF THE SHAP EXISTING 127 C TO BE BUMOWED SHOUSE PLAIN RIP HAS CLASS AZR TATERAL DITCÀ NULL: LOG VONE LUCATIONS MAY BE OF BRID BY INCINCIB XXX STREAMBANK REFORESTALION. SEE OSM-9, OSM-10 AND PROJECT SPECIAL PROVISIONS

2 ACRES STREAMBANK REFORESTATION





SEE OSM-9, OSM-10 AND PROJECT SPECIAL PROVISIONS